

WHAT IS CLAIMED IS:

1. A method for manufacturing a color wheel which comprises a disk-like substrate made of a light-transmittable material, and plural kinds of filter sectors formed on the substrate and functioning either to selectively transmit or to selectively reflect lights having respective different wavelength bands, the method comprising the steps of:

forming, on the substrate, a mask pattern to demarcate predetermined filter sectors of a kind functioning to either transmit or reflect light having a specific wavelength band;

setting, over the substrate having the mask pattern formed thereon, a masking jig which has openings dimensioned slightly larger than the predetermined filter sectors;

forming, on the substrate with the masking jig set thereon, predetermined filters to constitute the predetermined filter sectors;

taking off the masking jig from the substrate having the predetermined filters formed thereon; and

removing the mask pattern from the substrate with the masking jig taken off therefrom.

2. A method for manufacturing a color wheel according to Claim 1, wherein the step of forming a mask pattern includes: applying photo resist onto the substrate thereby forming a resist film; and shaping the resist film into a negative pattern configured such that the substrate is exposed at regions corresponding to the predetermined filter sectors.

3. A method for manufacturing a color wheel according to Claim 1, wherein the step of forming a mask pattern includes: forming an electrically conductive thin film on the substrate; applying photo resist onto the electrically conductive thin film thereby forming a resist film; shaping the resist film into a positive pattern configured such that the electrically conductive thin film formed on the substrate is exposed except at regions corresponding to the predetermined filter sectors; forming a plating layer on exposed portions of the electrically conductive thin film by an electroplating process conducted by leveraging the electrically conductive thin film as an electrode; removing the resist film; and removing the electrically conductive thin film formed at the regions corresponding to the predetermined filter sectors.

4. A method for manufacturing a color wheel according to any one of Claims 1 to 3,

wherein the step of forming the predetermined filters includes forming dielectric multi-layer films, and wherein the masking jig is fixed to a dielectric multi-layer film forming apparatus whereby the substrate, together with the masking jig, is held inside the apparatus.

5. A color wheel comprising a disk-like substrate made of a light-transmittable material, and plural kinds of filter sectors formed on the substrate and each kind thereof functioning to either transmit or reflect light having a specific wavelength band, wherein the filter sectors are formed by one of the methods according to any one of Claims 1 to 4.

6. A color wheel according to Claim 5, wherein the color wheel, together with a motor for rotating the color wheel, composes a color wheel assembly.

7. A color wheel according to Claim 6, wherein the color wheel assembly incorporating the color wheel is employed in an image display apparatus.